

Fraction Addition

Multiples for Denominators - Reducible Result - No Regrouping

Name: _____ Date: _____

 Add.

(1) $-1\frac{3}{8} + 3\frac{1}{2} =$

(2) $2\frac{7}{15} + -4\frac{1}{3} =$

(3) $-6\frac{11}{15} + 7\frac{1}{5} =$

(4) $-3\frac{1}{5} + 4\frac{7}{15} =$

(5) $6\frac{2}{5} + -5\frac{3}{10} =$

(6) $-7\frac{1}{10} + 5\frac{3}{5} =$

(7) $2\frac{1}{4} + -6\frac{11}{20} =$

(8) $-5\frac{2}{7} + 6\frac{2}{21} =$

(9) $5\frac{5}{6} + -1\frac{1}{24} =$

(10) $-6\frac{4}{15} + 7\frac{1}{3} =$

Fraction Subtraction

Multiples for Denominators - Reducible Result - No Regrouping

Name: _____ Date: _____



Subtract.

$$(1) -7\frac{1}{2} - 5\frac{3}{10} =$$

$$(2) 4\frac{7}{15} - (-2\frac{1}{3}) =$$

$$(3) 6\frac{2}{3} - 5\frac{1}{15} =$$

$$(4) -7\frac{1}{2} - (-2\frac{1}{6}) =$$

$$(5) -6\frac{5}{9} - 2\frac{1}{3} =$$

$$(6) 6\frac{3}{8} - 3\frac{1}{4} =$$

$$(7) 7\frac{7}{8} - (-5\frac{1}{16}) =$$

$$(8) 7\frac{4}{15} - (-1\frac{1}{5}) =$$

$$(9) -5\frac{5}{6} - 2\frac{1}{24} =$$

$$(10) -5\frac{1}{4} - 3\frac{1}{20} =$$

Fraction Multiplication

Both Mixed Fractions - May Cross-Reduce

Name: _____ Date: _____



Multiply.

$$(1) \quad 1\frac{11}{12} \times 4\frac{1}{2} = \frac{23}{\cancel{12}_4} \times \frac{3\cancel{7}}{2} = \frac{69}{8} = 8\frac{5}{8}$$

$$(2) \quad 4\frac{2}{3} \times 1\frac{3}{11} =$$

$$(3) \quad 1\frac{6}{7} \times 3\frac{3}{4} =$$

$$(4) \quad 2\frac{1}{4} \times 2\frac{1}{8} =$$

$$(5) \quad 2\frac{1}{3} \times 2\frac{1}{11} =$$

$$(6) \quad 1\frac{1}{2} \times 2\frac{1}{7} =$$

$$(7) \quad 2\frac{2}{3} \times 2\frac{3}{4} =$$

$$(8) \quad 2\frac{1}{2} \times 3\frac{8}{15} =$$

$$(9) \quad 1\frac{1}{2} \times 4\frac{1}{4} =$$

$$(10) \quad 1\frac{2}{3} \times 4\frac{7}{11} =$$

Fraction Division

Both Mixed Fractions - May Cross-Reduce

Name: _____ Date: _____



Divide.

$$(1) \quad 4\frac{1}{4} \div 2\frac{2}{9} = \frac{17}{4} \div \frac{20}{9} = \frac{17}{4} \times \frac{9}{20} = \frac{153}{80} = 1\frac{73}{80}$$

$$(2) \quad 1\frac{3}{4} \div 1\frac{8}{9} =$$

$$(3) \quad 1\frac{1}{2} \div 2\frac{5}{8} =$$

$$(4) \quad 4\frac{3}{4} \div 2\frac{4}{5} =$$

$$(5) \quad 2\frac{1}{10} \div 1\frac{2}{3} =$$

$$(6) \quad 2\frac{2}{5} \div 4\frac{3}{8} =$$

$$(7) \quad 2\frac{5}{6} \div 4\frac{3}{4} =$$

$$(8) \quad 3\frac{5}{6} \div 3\frac{1}{6} =$$

$$(9) \quad 1\frac{1}{2} \div 1\frac{13}{14} =$$

$$(10) \quad 3\frac{5}{7} \div 2\frac{3}{5} =$$

Fraction Addition

Multiples for Denominators - Reducible Result - No Regrouping

Name: _____ Date: _____

 Add.

$$(1) -1\frac{3}{8} + 3\frac{1}{2} = 3\frac{4}{8} - 1\frac{3}{8} = \boxed{+2\frac{1}{8}}$$

"larger"

$$(2) 2\frac{7}{15} + -4\frac{1}{3} = 3\cancel{4}\frac{7}{15} + \frac{15}{15} - 2\frac{7}{15} = 3\frac{20}{15} - 2\frac{7}{15} = \boxed{-1\frac{13}{15}}$$

"larger"

$$(3) -6\frac{11}{15} + 7\frac{1}{5} = 6\cancel{7}\frac{3+15}{15} - 6\frac{11}{15} = 6\frac{18}{15} - 6\frac{11}{15} = \boxed{7/15}$$

"larger"

$$(4) -3\frac{1}{5} + 4\frac{7}{15} = 4\frac{7}{15} - 3\frac{3}{15} = \boxed{1\frac{4}{15}}$$

"larger"

$$(5) 6\frac{2}{5} + -5\frac{3}{10} = 6\frac{4}{10} - 5\frac{3}{10} = \boxed{1\frac{1}{10}}$$

"larger"

$$(6) -7\frac{1}{10} + 5\frac{3}{5} = 6\cancel{7}\frac{1+10}{10} - 5\frac{6}{10} = 6\frac{11}{10} - 5\frac{6}{10} = -1\frac{5}{10} = \boxed{-1\frac{1}{2}}$$

"larger"

$$(7) 2\frac{1}{4} + -6\frac{11}{20} = 6\frac{11}{20} - 2\frac{5}{20} = -4\frac{6}{20} = \boxed{-4\frac{3}{10}}$$

"larger"

$$(8) -5\frac{2}{7} + 6\frac{2}{21} = 5\cancel{6}\frac{2+21}{21} - 5\frac{6}{21} = 5\frac{23}{21} - 5\frac{6}{21} = \boxed{1\frac{17}{21}}$$

"larger"

$$(9) 5\frac{5}{6} + -1\frac{1}{24} = 5\frac{20}{24} - 1\frac{1}{24} = \boxed{4\frac{19}{24}}$$

"larger"

$$(10) -6\frac{4}{15} + 7\frac{1}{3} = 7\frac{5}{15} - 6\frac{4}{15} = \boxed{1\frac{1}{15}}$$

"larger"

① Take sign of "larger" #
② Subtract

Fraction Subtraction

Multiples for Denominators - Reducible Result - No Regrouping

Name: _____ Date: _____



Subtract.

Leave it, Change it, Change it

$$(1) -7\frac{1}{2} - 5\frac{3}{10} = -7\frac{5}{10} + -5\frac{3}{10} = -12\frac{8}{10} = \boxed{-12\frac{4}{5}}$$

$$(2) 4\frac{7}{15} - (-2\frac{1}{3}) = 4\frac{7}{15} + +2\frac{5}{15} = 6\frac{12}{15} = \boxed{6\frac{4}{5}}$$

$$(3) 6\frac{2}{3} - 5\frac{1}{15} = 6\frac{10}{15} - 5\frac{1}{15} = 1\frac{9}{15} = \boxed{1\frac{3}{5}}$$

$$(4) -7\frac{1}{2} - (-2\frac{1}{6}) = \underbrace{-7\frac{3}{6}}_{\text{larger}} + +2\frac{1}{6} = -7\frac{3}{6} - 2\frac{1}{6} = -9\frac{4}{6} = \boxed{-5\frac{1}{3}}$$

$$(5) -6\frac{5}{9} - 2\frac{1}{3} = -6\frac{5}{9} + -2\frac{2}{9} = \boxed{-8\frac{7}{9}}$$

$$(6) 6\frac{3}{8} - 3\frac{1}{4} = 6\frac{3}{8} - 3\frac{2}{8} = \boxed{3\frac{1}{8}}$$

$$(7) 7\frac{7}{8} - (-5\frac{1}{16}) = 7\frac{14}{16} + +5\frac{1}{16} = \boxed{12\frac{15}{16}}$$

$$(8) 7\frac{4}{15} - (-1\frac{1}{5}) = 7\frac{4}{15} + +1\frac{3}{15} = \boxed{8\frac{7}{15}}$$

$$(9) -5\frac{5}{6} - 2\frac{1}{24} = -5\frac{20}{24} + -2\frac{1}{24} = -7\frac{21}{24} = \boxed{-7\frac{7}{8}}$$

$$(10) -5\frac{1}{4} - 3\frac{1}{20} = -5\frac{5}{20} + -3\frac{1}{20} = -8\frac{6}{20} = \boxed{-8\frac{3}{10}}$$

Fraction Multiplication

Both Mixed Fractions - May Cross-Reduce

ANSWER KEY



Multiply.

$$(1) \quad 1\frac{11}{12} \times 4\frac{1}{2} = \frac{23}{12} \times \frac{3}{2} = \frac{69}{24} = 8\frac{5}{8}$$

$$(2) \quad 4\frac{2}{3} \times 1\frac{3}{11} = \frac{14}{3} \times \frac{14}{11} = \frac{196}{33} = 5\frac{31}{33}$$

$$(3) \quad 1\frac{6}{7} \times 3\frac{3}{4} = \frac{13}{7} \times \frac{15}{4} = \frac{195}{28} = 6\frac{27}{28}$$

$$(4) \quad 2\frac{1}{4} \times 2\frac{1}{8} = \frac{9}{4} \times \frac{17}{8} = \frac{153}{32} = 4\frac{25}{32}$$

$$(5) \quad 2\frac{1}{3} \times 2\frac{1}{11} = \frac{7}{3} \times \frac{23}{11} = \frac{161}{33} = 4\frac{29}{33}$$

$$(6) \quad 1\frac{1}{2} \times 2\frac{1}{7} = \frac{3}{2} \times \frac{15}{7} = \frac{45}{14} = 3\frac{3}{14}$$

$$(7) \quad 2\frac{2}{3} \times 2\frac{3}{4} = \frac{8}{3} \times \frac{11}{4} = \frac{22}{3} = 7\frac{1}{3}$$

$$(8) \quad 2\frac{1}{2} \times 3\frac{8}{15} = \frac{5}{2} \times \frac{53}{15} = \frac{53}{6} = 8\frac{5}{6}$$

$$(9) \quad 1\frac{1}{2} \times 4\frac{1}{4} = \frac{3}{2} \times \frac{17}{4} = \frac{51}{8} = 6\frac{3}{8}$$

$$(10) \quad 1\frac{2}{3} \times 4\frac{7}{11} = \frac{5}{3} \times \frac{51}{11} = \frac{85}{11} = 7\frac{8}{11}$$

S *shape*
- change to
improper
fractions

O *operate*
num \times num
den \times den

S *simplify*
* can simplify
before
multiplying

Fraction Division

Both Mixed Fractions - May Cross-Reduce

ANSWER KEY

 Divide.

$$(1) \quad 4\frac{1}{4} \div 2\frac{2}{9} = \frac{17}{4} \div \frac{20}{9} = \frac{17}{4} \times \frac{9}{20} = \frac{153}{80} = 1\frac{73}{80}$$

$$(2) \quad 1\frac{3}{4} \div 1\frac{8}{9} = \frac{7}{4} \div \frac{17}{9} = \frac{7}{4} \times \frac{9}{17} = \frac{63}{68}$$

$$(3) \quad 1\frac{1}{2} \div 2\frac{5}{8} = \frac{3}{2} \div \frac{21}{8} = \frac{3}{2} \times \frac{8}{21} = \frac{4}{7}$$

$$(4) \quad 4\frac{3}{4} \div 2\frac{4}{5} = \frac{19}{4} \div \frac{14}{5} = \frac{19}{4} \times \frac{5}{14} = \frac{95}{56} = 1\frac{39}{56}$$

$$(5) \quad 2\frac{1}{10} \div 1\frac{2}{3} = \frac{21}{10} \div \frac{5}{3} = \frac{21}{10} \times \frac{3}{5} = \frac{63}{50} = 1\frac{13}{50}$$

$$(6) \quad 2\frac{2}{5} \div 4\frac{3}{8} = \frac{12}{5} \div \frac{35}{8} = \frac{12}{5} \times \frac{8}{35} = \frac{96}{175}$$

$$(7) \quad 2\frac{5}{6} \div 4\frac{3}{4} = \frac{17}{6} \div \frac{19}{4} = \frac{17}{6} \times \frac{4}{19} = \frac{34}{57}$$

$$(8) \quad 3\frac{5}{6} \div 3\frac{1}{6} = \frac{23}{6} \div \frac{19}{6} = \frac{23}{6} \times \frac{6}{19} = \frac{23}{19} = 1\frac{4}{19}$$

$$(9) \quad 1\frac{1}{2} \div 1\frac{13}{14} = \frac{3}{2} \div \frac{27}{14} = \frac{3}{2} \times \frac{14}{27} = \frac{7}{9}$$

$$(10) \quad 3\frac{5}{7} \div 2\frac{3}{5} = \frac{26}{7} \div \frac{13}{5} = \frac{26}{7} \times \frac{5}{13} = \frac{10}{7} = 1\frac{3}{7}$$

S
hape
- change to
improper
fractions

O
perate
leave it
Change it
Flip it

S
implify